Benjamin J. Cayetano, Governor

Hawaii Flood Management News

Department of Land and Natural Resources
Land Division, Engineering Branch

February 2002

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We welcome newsworthy items from the general public. Articles may be sent to the Engineering Branch, Land Division, DLNR, P. O. Box 373, Honolulu, Hawaii 96809. Call (808) 587-0248 for more information.

If you'd like to receive this newsletter via email, please send your email address to Carol_L_Tyau@exec.state.hi.us or if you wish to be removed from the mailing list please contact Elaine Keb at 587-0227.

Inside This Issue

National Flood Insurance Program

The National Flood Insurance Program (NFIP) is a Federal program which was established to allow property owners in participating communities to purchase insurance protections against losses from flooding.

Participation in the NFIP is based on an agreement between local communities and the Federal Government that states if a community will adopt and enforce a floodplain management ordinance to reduce future flood risks to new construction and substantial improvements in Special Flood Hazard Areas, the Federal Government will make flood insurance available within the community at a low cost.

The NFIP is administered by the Federal Insurance and Mitigation Administration (FIMA), formerly the Federal Insurance Administration (FIA) and the Mitigation Directorate, components of the Federal Emergency Management Agency (FEMA). The Department of Land and Natural Resources (DLNR) has been designated as the State Coordinating Agency responsible for assisting the coordination of the program between the Federal and County agencies in Hawaii. This responsibility is authorized by Chapter 179 of the Hawaii Revised Statues. Each County is a participating community in the NFIP. The following is a contact list of the County's NFIP Coordinators:

City and County of Honolulu
Department of Planning and Permitting

- Mr. Robert Sumitomo (808) 523-4254
- Mr. Mario Siu Li (808) 523-4247

County of Hawaii
Department of Public Works

- Mr. Kelly Gomes (808) 961-8327 (Hilo)
- Mr. Kiran Emler (808) 327-3530 (Kona)

County of Maui
Department of Planning

- Mr. Francis Cerizo (808) 270-7771

County of Kauai
Department of Public Works

- Mr. Wallace Kudo (808) 241-6620

Who's Who?

Department of Land and Natural Resource Dam Safety and Flood Control Section is headed by Mr. Sterling Yong. Mr. Yong is also the State's National Flood Insurance Program Coordinator. He is assisted by Mr. Edwin Matsuda and Ms. Carol Tyau.

Flood Insurance Rate Maps

The entire set of Flood Insurance Rate Maps (FIRMs) for the island of Oahu have been reprinted. The current effective date is November 20, 2000. To order maps, call FEMA Map Service Center at: 1-800-358-9616 or online at http://web1.msc.fema.gov

Useful Links

- Federal Emergency Management Agency (FEMA):

  www.fema.gov

- National Flood Insurance Program:

  www.fema.gov/nfip

- The Association of State Floodplain Managers (ASFPM):

  www.floods.org

- U.S. Army Corps of Engineers, Hydrologic Engineering Center:

  www.hec.usace.army.mil

- American Society of Civil Engineers:

  www.asce.org

- Association of Dam Safety Officials:

  www.damsafety.org

- Department of Land and Natural Resources:

  www.state.hi.us/dlnr

HEC-RAS and the NFIP

On April 30, 2001 the Federal Emergency Management Agency (FEMA) issued a memorandum regarding the use of HEC-RAS in the National Flood Insurance Program (NFIP). The memo stated that the majority of the detailed Flood Insurance Studies (FISs) and Flood Insurance Rate Maps (FIRMs) in existence today have utilized the U.S. Army Corps of Engineers' (USACE) HEC-2 hydraulic model to calculate Base Flood Elevations (BFEs). Title 44 of the Code of Federal Regulation, Paragraph 65.6 (a)(8) states that the computer model used in support of a map revision must be the same computer model as was used in the original study. However, since the USACE replaced the HEC-2 hydraulic model with the River Analysis System (HEC-RAS), FEMA is revising its policy to encourage the use of HEC-RAS when appropriate using the following guidance:

New detailed Flood Insurance Studies

For FISs that have not yet been started, and for streams for which there is not an effective detailed study, FEMA strongly encourages the use of HEC-RAS instead of the HEC-2 model.

Revisions to Effective Flood Insurance Studies

For revisions or restudies of detailed-studied streams, where the effective model is HEC-2, the conversion to HEC-RAS is encouraged. The following guidelines must be followed to convert an effective HEC-2 model to HEC-RAS:

- The effective HEC-2 model should be rerun on the requestor's computer in HEC-RAS to create the duplicate effective model. The differences in water-surface elevation (WSELs) between the effective model and the duplicate effective model must be fully documented and thoroughly explained. Most differences in WSELs can be attributed to the (1) differences in bridge/culvert modeling routines, (2) method of conveyance calculations, (3) critical depth default, and (4) floodway computations. The *HEC-RAS User's Manual* and the HEC-*RAS Hydraulic Reference Manual* provides details on computational differences between the two models and guidance on simulating HEC-2 results; these manuals should be consulted to explain the differences between the effective and duplicate effective models.

- Once the duplicate effective model has been established, the corrected effective, existing conditions, and post-project conditions models can be created in HEC-RAS, using the duplicate effective HEC-RAS model as the basis.

- The HEC-RAS models must tie in to the effective water-surface profile within 0.5 foot at the upstream and downstream ends of the revised reach, in compliance with Title 44 of the Code of Federal Regulation, Paragraph 65.6(a)(2).

The copy of this memorandum can be found at: http://www.fema.gov/mit/tsd/dl_hrpy.htm .

Source: Federal Emergency Management Agency

Elevation Certificate Training Now Offered Online for Surveyors

Certifying building elevations on the Elevation Certificate (EC) just became a lot easier, thanks to a new web based training module developed for land surveyors, engineers, and architects. The Surveyor's Guide to the Elevation Certificate is a new tutorial available through the National Flood Insurance Program (NFIP) web site hosted by the Federal Emergency Management Agency (FEMA). Located at www.fema.gov/nfip, the NFIP web site provides a wide range of information about all aspects of floodplain management and flood insurance.

After accessing the NFIP web site, visitors can select **"Surveyors"** under **"Audience Type"** to view the tutorial for surveyors. **The surveyor's tutorial also was developed to assist the community officials who monitor compliance with the elevation requirements of their respective floodplain ordinances.**

It takes about half an hour to browse through the new tutorial. At the home page of the Surveyor's Guide to the Elevation Certificate (http://training.nfipstat.com/ecsurveyor/), visitors view a short introduction to the EC and then click on three section tabs to move around the site.

- Clicking on the "Elevation Certificate" tab allows visitors to view and download an electronic copy of the EC along with instructions on how to complete it.
- Clicking on the "Surveyor Video" tab opens a video that briefly describes the process a surveyor follows to establish a building's elevation points.
- Clicking on the "Building Diagrams & Photos" tab displays a series of eight sample building diagrams and representative photos. This section of the tutorial is designed to allow surveyors, engineers, and architects where to take the necessary elevation measurements for each building diagram.

Navigation tools at the bottom of each page on the site provide information not only for how to move around within the tutorial and how to use each section most effectively, but they also allow visitors to email their questions or comments directly to EC specialists at FEMA. For more information about the Surveyor's Guide to the Elevation Certificate Training module, visit the site (If there are any questions about completing the EC, contact your State NFIP Coordinator or the FEMA, Region IX office.

BE FLOOD ALERT

NATIONAL FLOOD INSURANCE PROGRAM

Federal Emergency Management Agency

Myth vs. Fact

Who needs flood insurance? *Everyone.* And everyone in a participating community of the National Flood Insurance Program (NFIP) can buy flood insurance. Nationwide, more than 18,500 communities have joined the Program. In some instances, people have been told that they cannot buy flood insurance because of where they live. To clear up this and other misconceptions about National Flood Insurance, the NFIP has compiled a list of common myths about the Program, and the real facts behind them.

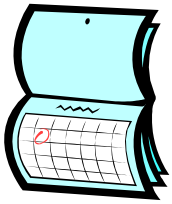
Every quarter, Hawaii Flood Management News will reveal a new "Myth vs. Fact" to give you the full story about this valuable protection. In fact, under the National Flood Insurance Act, lenders must require borrowers whose property is located within Special Flood Hazard Areas (SFHAs) to purchase flood insurance as a condition of receiving a Federally-backed mortgage loan. There is an exemption for conventional loans on properties within Coastal Barrier Resources System (CBRS) areas. Lenders should notify borrowers that their property is located in a SFHA and that Federal flood insurance is available.

Myth:
You can't buy flood insurance if you are located in a high-flood-risk area.

Fact:
You can buy Federal flood insurance no matter where you live if your community belongs to the NFIP, except in Coastal Barrier Resources System (CBRS) areas. The Program was created in 1968 to provide affordable flood insurance to people who live in areas with the greatest risk of flooding, called Special Flood Hazard Area (SFHAs).

Source: FEMA publication 002 (2/98) *"Myth and Facts about the NFIP"*

Upcoming Events



June 23-23, 2002
Association of State Floodplain Managers (ASFPM) 26th Annual Conference "Breaking the Cycle of Repetitive Flood Loss, Phoenix Arizona.

September 8-11, 2002
Association of Dam Safety Officials (ASDSO) Annual Dam Safety Conference, Tampa Florida.

Federal Emergency Management Agency
FLOOD HAZARD Mapping

Frequently Asked Questions (FAQ)

How do I get a revision to the Flood Insurance Rate Map?

A revision to the Flood Insurance Rate Map may be requested by completing and submitting the appropriate portions of the MT-2 application/certification forms package, entitled "Revisions to National Flood Insurance Program Maps" (FEMA Form 81-89 Series), and the required supporting information.

Where should I send my revision request?

Revision request should be sent to FEMA Region IX, Building 105, Presidio of San Francisco, San Francisco, California, 94129-1250.

When should I request a map revision to the FIRM?

If physical changes to the floodplain have changed the flood hazard information shown on the effective National Flood Insurance Program (NFIP) map, a revision should be requested. The request should be accompanied by the appropriate portions of the MT-2 application/certification forms package and the required supporting information.

"Flood Hazard Mapping FAQ" - continued on Page 6

CRS: A System That Works

The NFIP's Community Rating System (CRS) was implemented to recognize and encourage community floodplain management activities that exceed the minimum NFIP standards. The National Flood Insurance Reform Act of 1994 codified the CRS as part of the NFIP. Under the CRS, flood insurance premium rates are adjusted to reflect the reduced flood risk that results from community activities that meet the three CRS goals: **to reduce flood losses; to facilitate accurate insurance rating; and to promote the awareness of flood insurance**. Policy holders in CRS communities save more than $70,000,000 a year in premiums because of floodplain initiatives undertaken by participating communities.

Currently, only Maui is a CRS community. Maui policy holders (10,342) enjoy a 10 percent discount on their premiums for flood insurance. This translates to a reduction of $256,758 from a total of $2,567,576 in paid insurance premiums. In the State, we have a total of 41,708 flood insurance policies with a total of $ 12,645,617 in paid insurance premiums. Imagine, if the four communities embraced the CRS and earned a Class 8 rating-10% discount in insurance premiums, the policy holders in the State would save $1,264,562 in flood insurance premiums.

There are 10 CRS classes and discounts. Class 1 requires the most credit points and gives the largest premium reduction. Class 10 receives no premium reduction. Most communities have earned a rating of Class 8 or 9. One community, Tulsa, Oklahoma, has achieved a Class 3 rating.

Community Classification (U.S.) As of October 1, 2000			
Class	Premium Discount	Number of Communities	Percentage of Communities
9	5%	431	47%
8	10%	352	38%
7	15%	110	12%
6	20%	27	3%
5	25%	5	0%
4	30%	0	0%
3	35%	1	0%
2	40%	0	0%
1	45%	0	0%
	Total	926	100%

CRS recognizes 18 creditable activities, organized under four categories:

- **Public Information** - Credit is given for programs that advise people about the flood hazard, flood insurance, and ways to reduce flood damage. These activities also provide data needed by insurance agents for accurate flood insurance rating. They generally serve all members of the community and work toward all three goals of the CRS.

"CRS: A System that Works" - continued on Page 6

Dams in Hawaii

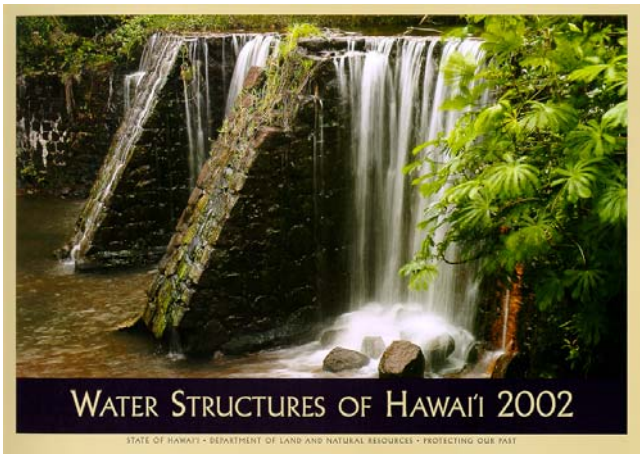
Did you know that there are 130 dams in Hawaii that are registered in the National Dam Inventory? When most of us hear the word "Dam" we may envision a massive concrete structure like Hoover Dam. In Hawaii, a "Dam" is defined in Chapter 190 of the Hawaii Administrative Rules (http://www.state.hi.us/dlnr/lmd/rules/CHAP190.pdf) as any artificial barrier, including appurtenant works, which impounds or diverts water, and which:

(1) Is twenty-five feet or more in height from the natural bed of the stream or watercourse measured at the downstream toe of the barrier, or from the lowest elevation of the outside limit of the barrier if it is not across a stream channel or watercourse, to a maximum water storage elevation; or
(2) Has an impounding capacity at maximum water storage elevation of fifty acre-feet or more. This chapter does not apply to any artificial barrier which is less than six feet in height regardless of storage capacity or which has a storage capacity at maximum water storage elevation less than fifteen acre-feet regardless of height.

Lake Wilson and Nuuanu Reservoir on Oahu may be some familiar local dams. Dams are inherently hazardous structures. Design failure or misoperation can result in the unintentional release of the reservoir contents. A dam failure can have detrimental impacts upstream and downstream of the failure which could result in loss of life, property damage, infrastructure disruption, environmental impacts, and even economic loss.

Through the collaborative efforts of both the private and public sector, dam safety has been improving. The National Dam Safety Act was passed in 1986. This legislation was enacted to assist states in improving their dam safety programs. The Department of Land and Natural Resources (DLNR), Engineering Branch administers the Hawaii Dam Safety Program. The DLNR reviews and approves plans and specifications for the construction of new dams or for the enlargement, alteration, repair, or removal of existing dams. Any persons seeking to construct, alter, or remove an existing dam must fill out the "APPLICATION FOR APPROVAL OF PLANS AND SPECIFICATIONS FOR CONSTRUCTION, ENLARGEMENT, REPAIR, ALTERATION, OR REMOVAL OF DAM" with the DLNR, Engineering Branch, Dam Safety Section (phone: 587-0248).

Source: Association of State Dam Safety Officials, Hawaii Revised Statutes



The picture to the left is a photograph of Stone Dam located in Kilauea, Kauai and it is the cover photo in the 2002 Department of Land and Natural Resources calendar. The theme this year is water structures of Hawaii. Calendars are available for $8.00 at the Department of Land and Natural Resources Store located on the 1st floor of Kalanimoku Building.

Spotlight

Spotlight, is a new section added to our newsletter. Every quarter *HFMN* will feature a FEMA publication which is available to the public free of charge.

This quarter's selection is:

Managing Floodplain Development In Approximate Zone A Areas

A Guide for Obtaining and Developing Base (100-year) Flood Elevations
April 1995

Overview:
This is a useful guide for anyone who may be required to develop base flood elevations (BFEs) in special flood hazard areas that have been identified and designated as approximate Zone A on the FIRM maps.

Zone A identifies an approximately studied special flood hazard area for which no BFEs have been provided. Although BFEs are not provided, the community is still responsible for ensuring that new development within approximate Zone A areas are constructed using methods that will minimize flood damages.

Also included is *QUICK-2* , a user friendly computer program that assists in the computations of flood water surface elevations in open channels.

To order publications you may write to:
FEMA
P.O. Box 2012
Jessup, MD 20794-2012

Or call 1-800-480-2520 M- F, 8:00 am—5:00 pm (ET). Or you may fax your request to 301-362-5335. DLNR Dam Safety / Flood Control Section also has a limited supply on hand. Call Carol Tyau at 587-0267 to reserve your copy.

"CRS "A System that Works" - continued from page 4

- **Mapping and Regulations** - Credit is given for programs that provide increased protection to new development. These activities include mapping areas not shown on the FIRM, preserving open space, enforcing higher regulatory standards, and managing storm water. The credit is increased for growing communities. These activities work toward the first and second goals of the CRS, damage reduction and accurate insurance rating.

- **Flood Damage Reduction** - Credit is given for programs in locations in which development is at risk. Credit is provided for a comprehensive floodplain management plan, relocating or retrofitting flood prone structures, and maintaining drainage systems. These activities work toward the first goal of the CRS, damage reduction.

- **Flood Preparedness** - Credit is given for flood warning, levee safety, and dam safety programs. These activities work toward the first and third goals of the CRS, damage reduction and hazard awareness.

Source: Federal Emergency Management Agency

"Flood Hazard Mapping FAQ" - continued from page 4

Do I submit a fee with my map revision request?

In most cases, yes. To ensure full reimbursement of funds expended to review and process most map change requests, FEMA established a standard fee schedule. The fee schedule is published periodically in the *Federal Register* and appears in the application/certification forms package.

How can I expedite my request?

Because FEMA receives many requests, they are processed on a first-come, first-serve basis. The best way to get a timely response is to make sure the forms and supporting information are complete.

Additional Help?

Call 1-877-FEMA-MAP or email a Map Specialist at bakermail@mbakercorp.com. Map Specialists are well-versed in the Letter of Map Change process and are able to explain the process to callers who often have little familiarity with such data requirements.

Source: Federal Emergency Management Agency

Department of Land and Natural Resources
Engineering Branch, Land Division
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